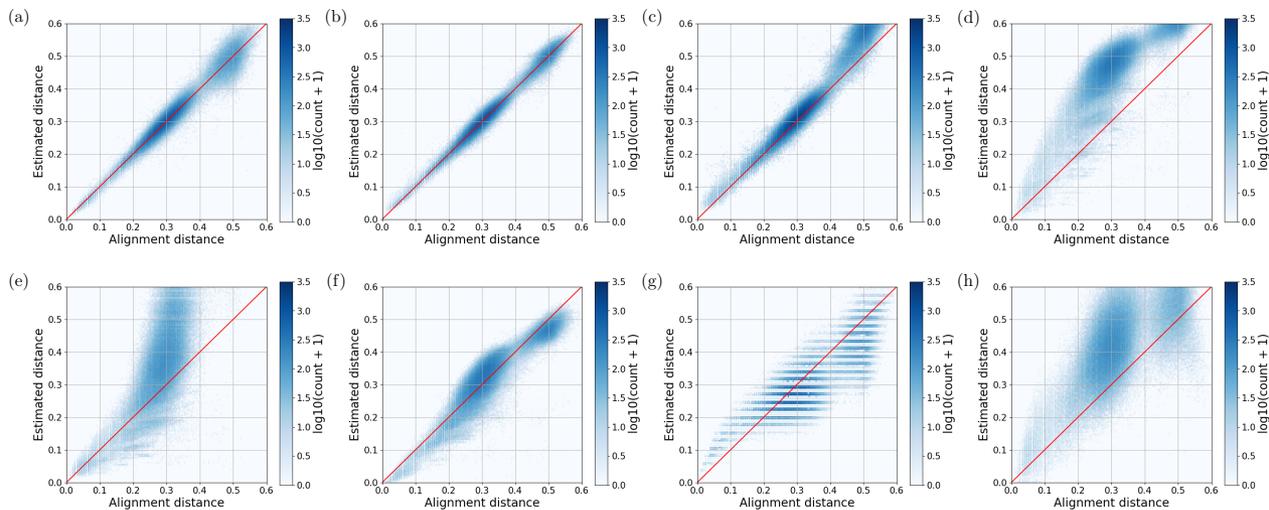
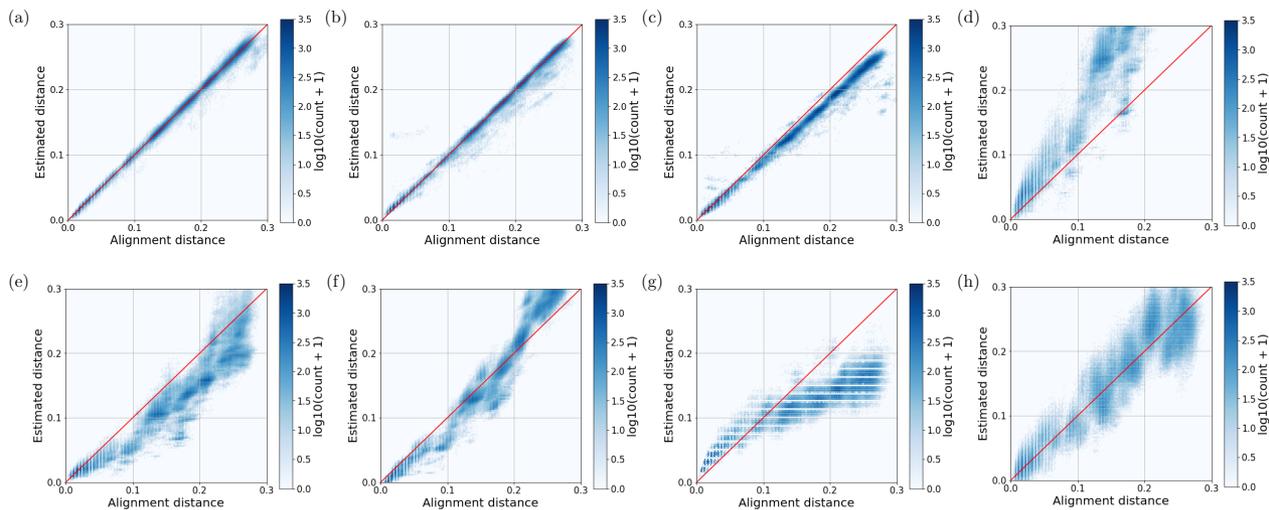


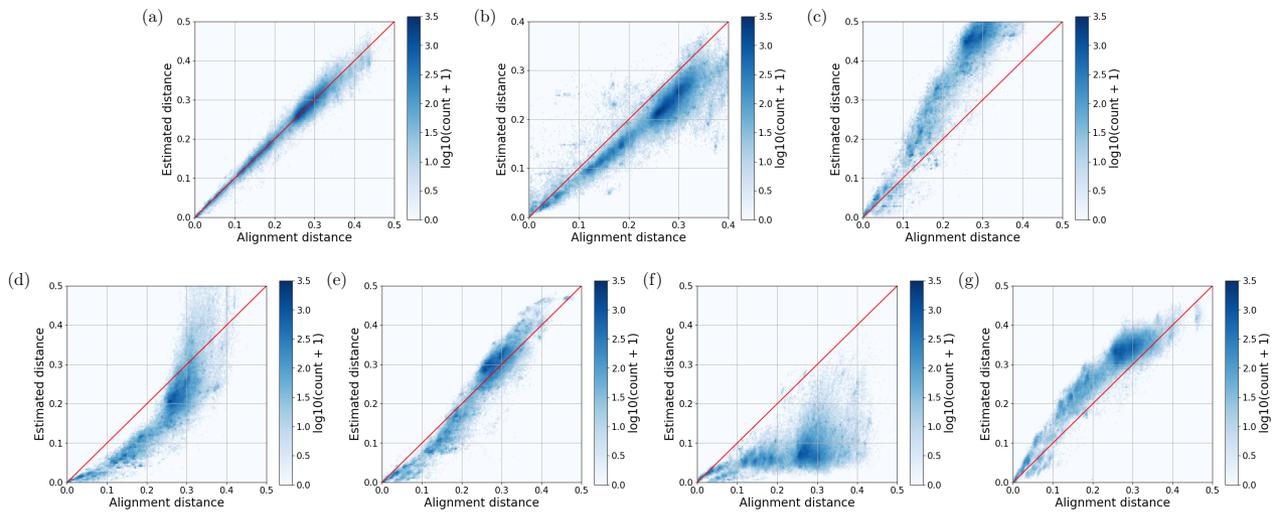
# Supplementary Data



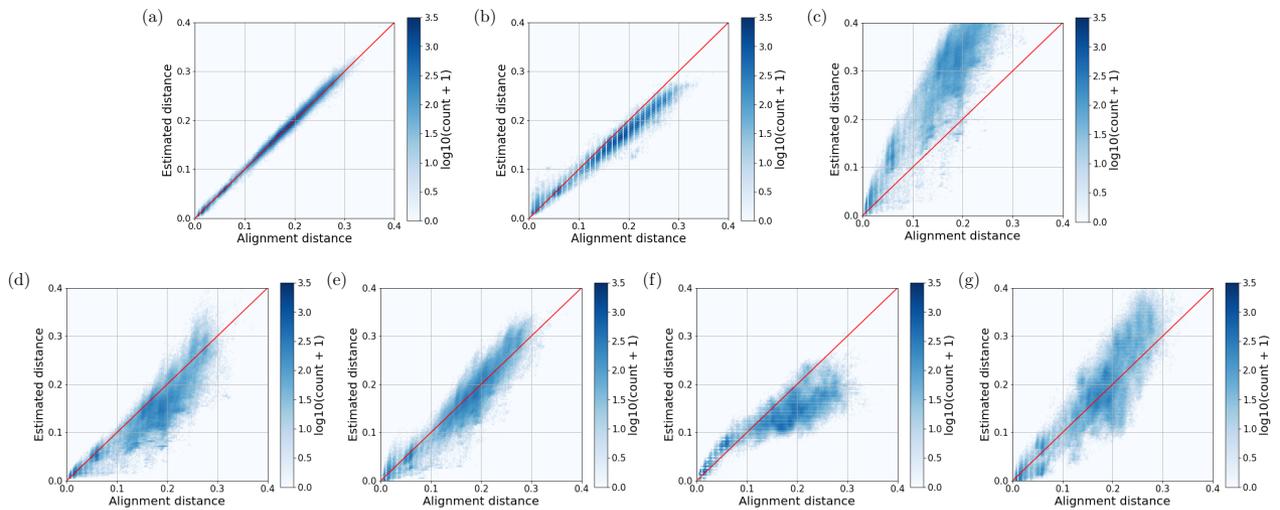
**Fig. 1.** Visualization of alignment distances versus estimated distances computed by eight methods: (a) AsMac, (b) SENSE, (c) NeuroSEED, (d) ACS, (e) Kr, (f) kmacs ( $k=2$ ), (g)  $k$ -mer ( $k=3$ ), and (h) FFP ( $l=9$ ), performed on the Qiita dataset. Each dot represents a sequence pair, and the color of a hex bin represents the number of sequence pairs in the bin. The number in a parenthesis is the parameter that achieved the best result for the corresponding method.



**Fig. 2.** Visualization of alignment distances versus estimated distances computed by eight methods: (a) AsMac, (b) SENSE, (c) NeuroSEED, (d) ACS, (e) Kr, (f) kmacs ( $k=2$ ), (g)  $k$ -mer ( $k=3$ ), and (h) FFP ( $l=10$ ), performed on the RT988 dataset.



**Fig. 3.** Visualization of alignment distances versus estimated distances computed by seven methods: (a) AsMac, (b) NeuroSEED, (c) ACS, (d) Kr, (e) kmacs ( $k=3$ ), (f)  $k$ -mer ( $k=6$ ), and (g) FFP ( $l=13$ ), performed on the Silva-23S dataset.



**Fig. 4.** Visualization of alignment distances versus estimated distances computed by seven methods: (a) AsMac, (b) NeuroSEED, (c) ACS, (d) Kr, (e) kmacs ( $k=2$ ), (f)  $k$ -mer ( $k=5$ ), and (g) FFP ( $l=12$ ), performed on the Labonte lake dataset.